9. The damped composite laminate of claim 1, wherein the reinforcement medium includes inclusions contained within the damping material.

10. The damped composite laminate of claim 9, wherein the inclusions include one of —

chopped carbon fibers,

fiberous strands,

z-fibers,

a split tape of fiber reinforced resin,

ceramic micro-balloons,

nano-fibers,

nano-tubes.

11. The damped composite laminate of claim 1, wherein the fiber material of the reinforcement medium includes a net formed of a first viscoelastic material.

12. The damped composite laminate of claim 11, wherein the damping material is formed of a second viscoelastic, and the net is impregnated with the second viscoelastic material.

13. The damped composite laminate of claim 1, wherein the reinforcement medium includes rigid connections between the respective barrier layers and third layer.

14. The damped composite laminate of claim 13, wherein:

the third layer includes perforations, and

the rigid connections include resin disposed within the perforations and extending between the first and second barrier layers.

15. A composite laminate structure, comprising:

at least first and second layers comprising a fiber reinforced with a resin;

a third layer positioned between the first and second layers, the third layer comprising a viscoelastic material having a first glass transition temperature and a fiber reinforcement having a second glass transition temperature greater than the first glass transition temperature, the third layer substantially excluding the resin of the first and second layers; and,

a first barrier layer disposed between and contacting the first layer and the third layer, and a second barrier layer disposed between and contacting the second layer and the third layer, said first and second barrier layers being formed of a thermoplastic fabric preventing intermixing of material comprising said first and second layers with material comprising said third layer.

16. The composite laminate of claim 15, wherein the viscoelastic material is thermoplastic polyurethane.

17. The composite laminate of claim 15 wherein the fiber reinforcement includes a fiber net extending through the viscoelastic material, generally parallel to the first and second layers.

18. The composite laminate of claim 17, wherein the fiber net is impregnated with one of a viscoelastic material and an epoxy resin.

19. The composite laminate of claim 15, wherein the fiber reinforcement includes individual fibers dispersed within the viscoelastic material.

20. The composite laminate of claim 15, wherein the fiber reinforcement includes a plurality of Z-fibers extending between the first and second barrier layers for reinforcing the viscoelastic material.

21. The composite laminate of claim 15, wherein the fiber reinforcement is co-cured to the first and second barrier layers.

22. The composite laminate of claim 15, wherein the third layer is co-cured with the first and second layers.

23. A damped composite laminate, comprising:

a first layer comprising a carbon fiber reinforced with a plastic material;

a second layer comprising a carbon reinforced with the plastic material; and

a third layer disposed between the first and second layers, the third layer including damping material comprising a first viscoelastic material having a first glass transition temperature and a reinforcement medium comprising a second viscoelastic material having a second glass transition temperature greater than the first glass transition temperature, the reinforcement medium comprising fiber material, the third layer substantially excluding the plastic material of the first layer and the second layer.

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